VIRGINIA ROANOKE RIVER BASIN ADVISORY COMMITTEE MEETING MINUTES
September 28, 2004
Explore Park

Attendance: All VRRBAC members except Sen. Hawkins, Sen. Ruff, Del. Byron, Del. Hurt, Del. Ware, Del. Wright, Bob Conner, John Feild, Watt Foster, and George Stovall. Evelyn Janney attempted to drive to the meeting but the roads from Floyd County were not passable due to impacts from Hurricane Jeanne remnants. Ann Austin represented Rep. Virgil Goode. DEQ: Greg Anderson; DCR: Tim Ott

Call to Order:

Vice- Chairman Poindexter called the meeting to order.

Recognition of New members and Visitors:

Vice- Chairman Poindexter welcomed everyone and recognized the new members, visitors, and guests. New members were Walter Coles and Rupert Cutler. Visitors and guests included Bob Camicia, SMLA and URRR, Frank Fiori, Franklin Co., Shane Sawyer, Roanoke Valley Alleghany PDC, Phil Schirmer, Roanoke City, Scott Shirley, Roanoke City, Curry Martin, Bedford County, Wes Jargowsky, Virginia Save Our Streams, Carol Davit, Western Virginia Water Authority, and Pam Dinkle, TLAC.

July 29, 2004 meeting minutes:

The minutes were approved.

Phil Schirmer, Roanoke City Engineer; "Roanoke River Flood Reduction Project"

- Jennifer Price is the project manager for Roanoke on this joint venture between the City and the US Army Corps of Engineers. The estimated cost of the project is $61 million with $18 million being the local share funded by the City of Roanoke and the remaining $43 million federal funds.

- The project has a long history dating back to the early 1970's. Several alternative plans have been studied to provide flood control benefits to the Roanoke Valley, including a flood control reservoir in Montgomery County.

- The project has four basic components:

    1. IFLOWS System – Flood forecasting system used by the National Weather Service (NWS)
    2. Flood proofing of Roanoke Memorial Hospital
    3. Flood Proofing of Water Pollution Control Plant
    4. Flood Reduction to the Roanoke River Channel within the City of Roanoke

- IFLOWS and flood proofing of the hospital and WPCP are completed. IFLOWS provides real time data to the NWS and Roanoke Emergency Dispatch Services use this information for its operations. The system includes a network of about 15 rain gages and some flow gages throughout the 500 square mile watershed above Roanoke. This information is routed to a central computer and a forecast of flooding conditions is completed. Flood stage here is above 10 feet at the Walnut Street Bridge. The flood of 1985 reached about 22 feet.

- The purpose of the project is to lessen the impact of flooding on real estate in the City of Roanoke. The expected benefits are a reduction in the extent and frequency of flooding associated with the 5-year, 10-year, and 25-year storm events. Some flood stage reduction is provided for the 100-year event. Some think this is not a big deal but it is if you have 2 feet of water in your business versus no water. The real estate along the river in Roanoke is valued at over $ 150 million. The design features widening and improving the river channel so that it carries more water. This will be done by two mechanisms, a bench-cut and training walls. A bench cut is when a cut is made into the bank a little above the normal surface

level of the river and a channel face is built. The training walls generally take the form of dikes or berms, which hold the river in its banks. Very little riprap and other mechanical features will be added. The channel banks will be restored with native grasses and riparian plantings. The project will be done in two phases. Contract I will be awarded to go from the Roanoke Regional WPCP to Wasena Park. Contract II will include the stretch from Wasena Park to the City of Salem limit. A "greenway" recreation trail is part of the project and extends for the entire ten-mile length of the project.

- The project schedule is that Contract I is ready for bid. All land and easements have been acquired and work is expected to start in 2006. Contract II is in the design phase and expected to start in 2008. It is hoped that the entire project will be completed around 2010. The only holdup is the securing of federal funds.

- **Question: Do any railways, streets, or bridges have to be relocated to make way for the project.** There are no plans to do anything with the bridges although they do create obstacles in certain places. Where necessary we are trying to wind the trail around the bridges and riprap is being used at the bridge abutments. This is the only locations that riprap is being used.

- **Question: What is your legal method of land acquisition? Eminent Domain?** This would be a last resort. We were lucky for phase 1 because we were able to get all the property through negotiation.

- **Question: Are the contiguous jurisdictions involved?** They had the opportunity early in the process but opted out. A comment was made that there may be another opportunity for neighboring jurisdictions to work together to control storm water on the tributaries. The charter of the Western Virginia Water Authority enables it to both add neighboring jurisdictions over time and to take on responsibility for storm water management in the future if that is the desire of the localities.

- **Comment:** Rupert Cutler indicated that the "greenway" would hopefully be part of a larger greenway network which will eventually connect with Montgomery County and Franklin County. There is a popular Green way Commission in the area that is involved with this effort. Another planned trail will lead from Salem to the Explore Park. Others are planned on the other tributaries. The River is a very important recreational river and it is a trout stream. One of the constraints on the ACOE conducting this project is the existence of an endangered species the Roanoke Logperch. This helped with moderating effect on the extent the channel would be modified and thus any degradation of the fish habitat. The City is working with a "Land Trust" to try and get landowners to donate a conservation easement or public access easements so that a linear park can be developed, much like the concept of San Antonio's River Walk.

Scott Shirley, Director of Wastewater Operations, Western Virginia Water Authority; "Water Pollution Control Plant Improvements".

- Scott briefly described the current project being done at the Roanoke Regional Water Pollution Control Plant. Progress is about midway through this $ 50 million expansion project. Improvements include a new headworks, a 2 million-gallon expansion of equalization capacity to 32 million gallons, a new disinfecting building, and 2-160 foot diameter clarifiers that add biological capacity to the plant. Also adding more flood protection so that the plant can continue to operate during more adverse flood conditions.

- **Question: What flood level will these design changes protect against?** At a 100-year event there will be about a 1.5 foot of freeboard on the floodwall. This is at an elevation of about 913 or 914 feet above sea level, which is around 19-20 feet river height. Mike McEvoy indicated that even with the flood protection changes the ACOE made the plant was still susceptible to flooding from Riverland Road. During the expansion this property was purchased and the protective berm will be extended.

- **Question: What flow will the plant now be able to process once expansion is completed?** About 90-100 MGD peak day flow and 55 MGD on average. Normal baseline flow is about 35 MGD. Last year, which was extremely wet, we averaged about 42 MGD, which is our permitted flow. The problem

at the WPCP is infiltration and inflow of rainwater into the sewer system during heavy or extended rain events. Then flows to the plant can jump to 120 MGD. The plant can not currently handle those high flows and must bypass a portion of them to the river. This expansion will give us greater capability to treat that flow, lessening the volume of untreated, yet very dilute sewage, being released to the stream. The WPCP treats the sewage for Salem, Roanoke, Vinton, Botetourt Co., and Roanoke Co. We are also trying to replace broken lines in the system and repair manholes. One option being looked at in this endeavor is trenchless technology to rehabilitate the pipes. This minimizes the disruption of neighborhoods and sediment runoff.

Shane Sawyer, Regional Planner, Roanoke Valley Alleghany PDC, "Roanoke Valley Long Range Water Supply System Study".

- This study was conducted by Black & Veatch Corporation, funded by the participating local governments and a grant from the Fifth Planning District Regional Alliance, and coordinated by the Roanoke Valley-Alleghany Regional Commission. The study was completed in 2003.

- The localities involved in the study were Bedford County, Botetourt County, Franklin County, Roanoke County, City of Roanoke, City of Salem, and the Town of Vinton.

- The scope of the study was to identify water supply deficiencies and potential additional sources. Source water capacity information was obtained and compared to projected 20-yr. and 50-yr demands. Then existing source expansion, raw or treated water interconnections, and new sources were looked at to increase supply.

- The objectives of the study were to identify the capacity of the existing water supply systems, current and future water supply needs, necessary improvements to the systems, potential future water sources, and options to ensure adequate supply to the Valley Region through 2050. It is projected that the regions population will increase by about 44 % during that time period.

- The primary alternatives considered were augmentation of the Spring Hollow System, augmentation of the Carvins Cove Reservoir System, expansion of the existing BCPSA Water Plant, and construction of a new regional water treatment plant on Smith Mountain Lake.

- Other alternatives examined included locating new reservoir sites throughout the region, groundwater supply, conservation and demand management, and water reuse.

- <u>Recommendations</u>:

1. To serve the projected potable water supply deficits for all of the participating jurisdictions, augmentation of Carvins Cove with raw water from Smith Mountain Lake is the least expensive option, followed by James River augmentation of Carvins Cove. Due to anticipated inter-basin transfer discussions and other potential concerns of existing water suppliers using the James River as a source, the Smith Mountain Lake option appears the most easily implemented at the least cost.

2. The least costly option for Bedford and Franklin Counties is to construct a water treatment plant on Smith Mountain Lake to satisfy their combined needs. However, if regional treatment redundancy is a desired objective of the participating jurisdictions, consideration should be given to constructing some additional capacity in the new plant, as well as constructing a pipeline to connect to Roanoke County's finished water transmission system.

3. Among the alternatives that would serve the interconnected communities of Vinton, Salem, Roanoke County, Roanoke, and half of Botetourt, the augmentation of Carvins Cove using raw water from Smith Mountain Lake is the least costly option. This is closely followed by augmentation of Spring Hollow

Reservoir with water from the New River, if discharged to Wilson Creek. The range of possible permitting issues associated with the option, including modifying withdrawal and discharge permits make it less attractive. It is notable that purchasing treated water from BCVPI Water Authority is not a great deal more costly. The benefits of regional treatment redundancy could justify the difference in cost.

4. Installation of a rubber bladder on the Carvins Cove dam to increase its operating depth and volume is a low capital cost to gain an additional 1.4 mgd of water supply. In concert with a small pipeline from Spring Hollow Reservoir, the project could provide more capacity, still for low cost. Further investigation is needed to address dam safety issues and other potential impacts associated with these two options. A range of capacities and operating strategies should be investigated to determine the optimum sizing for short-term as well as long-term operational benefits.

- There was also a series of general conclusions developed for consideration by policy makers. In addition, specific applications of the above recommendations to each locality were discussed. These may be viewed in the full report which can be found at http://www.rvarc.org/work/water.pdf

- **Comment: Pittsylvania County is not included in this study. They are looking at using Leesville Lake for a supply (perhaps 1.0-MGD). The intake would be located right below the confluence of the Pigg River. This is important because that water is really a part of the water volume in the Smith Mt. Project.** That's correct and that's is something that needs to be considered and followed.

- **Question: Franklin Co. was forced to go way down the lake for an intake due the relationship between treatment cost and water quality. Was this aspect considered in the study?** Yes. Of course it could end of costing more due to the increased cost of lines if moving downstream becomes necessary to find the same water quality as used in the study.

Sub-committee Reports:

Charles Poindexter indicated that the new members needed to be given subcommittee assignments.

Agriculture and Forestry

No report

Municipal Interests and Permit Holders

Mike reported that the Water Supply Planning rule is about to be released. All localities will be required to have a plan. Additionally the Chesapeake Bay Foundation is pushing for a "flush tax" to generate money for water quality improvements. In the East, nutrient improvements are needed and for non-bay areas they are looking for non-point source improvements. The figures mentioned are $ 4/month per connection, and $2-3/month for septic tanks. Charles mentioned that there are other ideas to raise this money and the fears are that the money will all go to the bay instead of the locality where its raised.

Lake Interests

No Report

Rivers:

No report

Water:

Mike McEvoy reported that Greg Anderson and himself traveled to Roanoke Rapids to meet with the leadership of NCRRBAC on September 8. Greg delivered a presentation about VRRBAC and our accomplishments. Mike answered questions concerning startup problems VRRBAC had faced. NCRRBAC hopes to begin meeting soon and wanted to have a joint meeting of the two advisory groups soon after their first meeting. Then it is hoped that the Bi-State Commission can begin meeting.

Other Business:

John H. Kerr 216 Meeting

- John Lindsey attended this meeting for VRRBAC in Raleigh on September 27, 2004. The purpose of this meeting was to have the John H. Kerr 216 committees to update the executive committee on progress. The executive committee also was determining which Committee Documents were mature enough to be funded and put out RFPs. There are a couple of committees associated with this study we could participate on meaningfully and we were invited to participate on them. These are the Sedimentation and Channel Morphology Committee and the Water Supply Committee, both that are applicable to the entire basin. It was indicated that over 200 applications for water withdrawals had been submitted for the Kerr Lake area. The latter committee is now looking at the entire Basin and they are very interested on the Water Supply Study for the Roanoke Valley. The Committee needs to decide whether to actively participate on one or both of these committees or to just continue to monitor the 216 Committee progress. John's full report will be scanned and distributed to members.

- Mike McEvoy indicated he would be happy to participate on the Water Supply Committee.

- The Sedimentation and Morphology Committee is concentrating on sedimentation studies and the profile of the channel of the existing downstream river. Streambank erosion is a big issue and one thing they are looking at is the length of time a bank is flooded. An extended flooding period kills the vegetation, and increases the rate of bank erosion. If the flooding was to be minimized ten the vegetation would not be killed and erosion would be less. The committee members present recommended that a representative of the rivers committee serve on this committee.

- Lisa Hetherman, ACOE, said she would put us in touch with the committee heads of the areas VRRBAC is interested in. The next meeting for the Team Leaders and the Executive Committee is scheduled for December 13, 2004. The Website for the study is http://www.saw.usace.army.mil/jhkerr_216/main.htm

Future Meetings:

The next meeting will be held in Richmond during January. A tentative date, time, and location are January 10, 10am, at the Library of Virginia.

Wes Jargowsky, Virginia Save Our Streams(SOS) Volunteer, Carol Davit, Environmental Communications Coordinator, Western Virginia Water Authority, "Virginia SOS Biological Monitoring Techniques Discussion and Demonstration"

Wes talked about the Virginia Save Our Streams program and its association with the Izaak Walton League. Jay Gilliam was instrumental in developing the program in VA. The focus of the group is watershed protection and enhancement. Upper James and the Shenandoah River are two very active and successful groups. They are working to get a group started in the upper Roanoke area. Wes and others train other interested water monitors in their techniques. The data that is collected can be used to point out pollution problems and can even be used by DEQ in the assessment process. Wes and Carol then demonstrated the techniques used and showed samples of the organisms collected.

Adjournment